



The Indianapolis Radio Club Newsletter

Founded 1914

"The oldest continuously operating Amateur Radio Club in the United States"

April 2013 Newsletter

Next Meetings:

May 10: Bob Osterhous, W9PSE, will talk about promoting Ham Radio. Also updates on Field Day and other upcoming events.

June 14: Annual Auction.

Highlights from the April Meeting:

Called to order at 7:30 by club president, Dave Spoelstra, N9KT. There were just under 60 in attendance. Tech question: What is the use of a balun? BALanced to UNbalanced conversion for going from balanced wire to unbalanced coax for connection of rig. Dave announced that we always have a couple of tables in the back of the room for "show and tell". The station at IVY Tech is moving forward. It is going to be a combination IVY Tech, IRC station. We hope to have it operational in 2 or 3 months. The plan is to have it accessible remotely for members' use. Ron, WB9DKL, talked about the Hilltop event. It will probably be in September. Check the Radio Club's [web page](#) for details for the contest. The Indiana QSO Party is scheduled for May 4, running from noon to midnight, local time, point your browser to <http://www.hdxcc.org/inqp/> for more information on the INQP. Use N1MM software to log all 3 QSO parties that are going on that day. Field Day will probably be at Camp Belzer. Tom Chance, K9XV, is the chair of this. April 21 at 1:00, there will be a Fox hunt at Garfield Park, shelter 5, organized by Steve Curtis, ND9C. Testing this Saturday Salvation Army at noon. Club treasurer Rhonda Curtis, WS9H, announced that Dayton bus tickets are available. Jay Wright, KK9L, announced that there will be a test session on 4/29 at 6:30 pm open session at 2016 E. Main St,

Danville. Mike Palmer, N9FEB, is asking for volunteers for the Mini-Marathon, the Geist marathon (Dayton Hamvention weekend), he has enough volunteers for the 500 Festival parade, he still needs some more volunteers for the Tour de Cure on June 8. Contact Mike at N9feb@comcast.net , or go to <http://www.indyhams.org/> for more information. Also, there are Mini-Marathon meetings on Friday 4/26 at 6:00 pm and Saturday 4/27 10:00 am at the Red Cross building. Volunteers for the Mini need to attend one of these meetings. Bob, W9BU solicited activity for the State ARES 80 meter SSB net from district 5. The net meets at 5:00 pm on 3900 kHz. If anyone has any questions, they can contact Bob at w9bu@arrl.net. Adam Fisher from Indiana Transportation museum is asking for CW operators for National Train Day on May 4 at 10:00 am. Steve, KB9RDS, reminded folks that 2 meter and 6 meter SSB activity is picking up.

Next, Dave introduced Tom Chance, K9XV, to talk about the District 5 repeater system. Design started in February 2011. This was a government funded project. District 5 is IDHS district 5, Marion County and the counties surrounding it (8 counties). Hardest thing about putting a repeater on the air is finding a tower to host the antenna(s). The antennas for these repeaters are on the 500 foot guyed tower at Willard Park (Washington and State streets). This tower was originally put up in 1976 for Marion County's 450 MHz analog radio system. There are twelve offset antenna mounts at the top of the tower. In 1976, the IRC took a tour of the site (*editor's note: See Signals from the Past later in this newsletter*). There were several receiver sites that voted into Willard Park. This tower was active until the early 90s. In the early 90s the county converted to an 800 MHz trunked system, with antennas on a new free standing tower next to the guyed tower. On the original engineering study, the tower consultant said the tower shouldn't be standing. There were lots of "political" negotiations that took place between the city and state. Tom went over the basics of a repeater system. The cable running to the antennas is 1 5/8" Andrews Heliax, very low loss at \$4.50 per foot. Aluminum sheathed with copper center conductor. The connectors for the cable are around \$250 each. Tom explained that this system is for County to State Coordination post-disaster. All in all, Tom gave a very detailed and interesting presentation on the systems.

Door Prizes awarded at 9:10 pm.

Ham Radio News:

INVITE FROM THE IWM, USS INDIANAPOLIS RADIO GUYS

Come to IWM & enjoy operating from the CA35 WW2 Radio room...
World Wide Museum Ships On the Air event. (since 2005) [8th year]

DATE: Friday, May 31st through Sunday, June 2nd (40 hrs) come for 1-2 hours ..to help OTA activities... TIME: 2000 Friday until 2000 Sunday (Set up beginning at 1830 Friday)

"SHIPS on the Air Event"

Parking: Free Meters (sat & SUN)

Entry IWM North door & 146.52 Mhz-Simplex

CW Operators Priority on Friday evening ...(CW Nite)..Bring own Key or Keyer

[] Goal to work 45 ships of those listed...???

[] As many as three (3) Ham stations will be available for this event

With IC756Pro radios & 500 -1000 watts (PA)+ N1NM PC logging , at each station .

Special Considerations: Weather & / or Communications conditions

[1] there will be multiple people arriving and leaving during the entire event times.

[]Use 146.52 for call in & entry or 146.67/r for checking on operations status

[]USS Indy radio Hams will be available to help Visiting Operators during museum hour's.

This is a 48 hour world wide event ...Indy Hams operate during the entire times if WX permits. (no Lightning)

Event Contact person : Chuck Crist, W9IH ussindyradio@hotmail.com

For Ops sign up (RSVP)...(walk-ins welcome)..

OPS Sked & More info at: www.USSIndyRadio.org/ussindyopssked-2013.htm

CONGRATS TO CARL, K9LA

The winner of the March QST Cover Plaque Award is Carl Luetzelschwab, K9LA for his article "The Sun and the Ionosphere." Congratulations Carl! The QST Cover Plaque Award -- given to the author or authors of the best article in each issue -- is determined by a vote of ARRL members on the QST Cover Plaque Poll web page.

BUS TO DAYTON TO BE AVAILABLE AGAIN THIS YEAR

Again this year, the Indianapolis Radio Club has made arrangements to have a chartered bus to the Dayton Hamvention. The day trip to Dayton will be on Saturday, May 18. The bus will have two pick up points: 6:30 am at Southern Plaza, and pick up around 7:00 am at Peddler's Mall on the east side. It will leave from Dayton around 4:00 pm. As in the past, there will be a short stop at McDonald's in Richmond on the way to Dayton for breakfast, and a dinner stop at MCL in Richmond on the way back. The cost for the round trip is \$30 per person, and does not include admission to the Hamvention. The bus

will drop off at the front door of Hara Arena, and be parked in close proximity of the facility so items can be stored on the bus for your convenience.

2013 INDY HAMFEST TO BE AT MARION COUNTY FAIRGROUNDS

NEW FOR 2013: Expanded Commercial Space, Air Conditioned Indoor Table Spaces, Air Conditioned Forum Building, Overnight Camping on the Grounds, and Expanded Outdoor Flea Market.

This year's date: Saturday, July 13, at the MARION COUNTY FAIR GROUNDS, 7300 East Troy Ave. Point your browser to <http://www.indyhamfest.com/> for more details.

W1AW 2013 SPRING/SUMMER OPERATING SCHEDULE

Morning Schedule:

Time	Mode	Days
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1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1400 UTC to 1600 UTC - (10 AM to 12 PM ET)

1700 UTC to 1945 UTC - (1 PM to 3:45 PM ET)

(Station closed 1600 to 1700 UTC (12 PM to 1 PM ET))

Afternoon/Evening Schedule:

2000 UTC (4 PM ET)	CWf	Mon, Wed, Fri
2000 " "	CWs	Tue, Thu
2100 " (5 PM ET)	CWb	Daily
2200 " (6 PM ET)	DIGITAL	Daily
2300 " (7 PM ET)	CWs	Mon, Wed, Fri
2300 " "	CWf	Tue, Thu
0000 " (8 PM ET)	CWb	Daily
0100 " (9 PM ET)	DIGITAL	Daily
0145 " (9:45 PM ET)	VOICE	Daily

0200 " (10 PM ET) CWf Mon, Wed, Fri
0200 " " CWs Tue, Thu
0300 " (11 PM ET) CWb Daily

Frequencies (MHz)

CW: 1.8025 3.5815 7.0475 14.0475 18.0975 21.0675 28.0675 147.555
DIGITAL: - 3.5975 7.095 14.095 18.1025 21.095 28.095 147.555
VOICE: 1.855 3.990 7.290 14.290 18.160 21.390 28.590 147.555

Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2230 UTC (6:30 PM ET), Keplerian Elements for active amateur satellites are sent on the regular digital frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0000 UTC (8 PM ET) Thursdays and 0000 UTC (8 PM ET) Fridays.

Audio from W1AW's CW code practices and CW/digital bulletins is available using EchoLink via the W1AW Conference Server named "W1AWBDCT." (The 9:45 PM ET phone bulletin is currently unavailable via W1AWBDCT.) The CW/digital audio is sent in real-time and runs concurrently with W1AW's regular transmission schedule.

All users who connect to the conference server are muted. Please note that any questions or comments about this server should not be sent via the "Text" window in EchoLink. Please direct any questions or comments to w1aw (at) arrl.org.

In a communications emergency, monitor W1AW for special bulletins as follows: Voice on the hour, Digital at 15 minutes past the hour, and CW on the half hour.

FCC licensed amateurs may operate the station from 1400 UTC to 1600 UTC (10 AM to 12 PM ET), and then from 1700 UTC to 1945 UTC (1 PM to 3:45 PM ET) Monday through Friday. Be sure to bring your current FCC amateur license or a photocopy.

The complete W1AW Operating Schedule may be found on page 90 in the January 2013 issue of QST or on the web at, <http://www.arrl.org/w1aw-operating-schedule>

NIST CHANGES BEING MADE TO WWVB MODULATION

NIST Changes WWVB Modulation to Improve ‘Atomic Clock’ Reception

Adds phase modulation to existing AM signal

The wristwatches and clocks that advertise accurate “atomic time” rely on the 60 kHz signal from WWVB in Boulder Colo. to synchronize them to official U.S. time. In the days of analog TV, some broadcasters used the 60 kHz signal to provide an accurate frequency reference for transmitters and sync generators, or for accurate studio time. While broadcasters have largely switched to GPS as the precision reference for time and frequency, those “atomic” consumer clocks still rely on WWVB, as it can be received indoors with a fairly simple receiver.

As with other devices using the lower frequency bands, harmonics from switching power supplies and noise from other electronic devices is making it more difficult to receive the 60 kHz WWVB signal indoors. To reduce the impact of this noise, NIST is now implementing a new phase modulation WWVB signal. The existing AM modulation will be retained so that old timekeepers will still work, but newer devices--expected to show up in the marketplace later this year--will benefit from the more robust phased-modulated signal.

NIST has a Web page, [WWVB Radio Controlled Clocks](#) that shows WWVB coverage and offers some tips on how to improve reception. Another Webpage, NIST Radio Station WWVB shows the transmit antennas and describes the time format. The paper Enhanced WWVB Broadcast Format explains the new modulation method and how the data is encoded.

FCC Grants Request for Temporary Waiver for TDMA Systems

Acting upon a subsequent request by the ARRL, the FCC issued an Order (WT Docket No, 12-283) on March 25, granting a temporary waiver to transmit communications on amateur service channels above 30 MHz using single time-slot Time Division Multiple Access (TDMA) systems. The temporary waiver was granted pending the resolution of a related rulemaking proceeding (RM-11625). The waiver can be found in PDF format at, http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0325/DA-13-542A1.pdf.

Currently, amateur stations currently are authorized to transmit messages using telephony and data emissions. The ARRL noted in its request that Amateur Radio Service licensees have recently established numerous narrowband repeater facilities using multiple time-slot TDMA repeaters and single-slot TDMA handheld digital transceivers in the 70 centimeter (420-450 MHz) band, but Part 97 as it currently stands does not permit amateur stations to transmit single-slot TDMA emissions on Amateur Radio Service channels above 30 MHz.

The FCC stated in its Order that the purpose of specifying emission designators for the Amateur Radio Service "is to relegate the transmission of certain inharmonious emission types to different segments of the frequency bands, while still allowing great flexibility in the types of emissions that may be transmitted by amateur stations." In granting the temporary waiver, the FCC agreed with the ARRL, noting that the digital systems that radio amateurs have recently implemented are "compatible with existing amateur repeater channelization plans."

The FCC also noted that allowing FXE and F7E as phone emissions and emission type FXD as a data emission "is unlikely to result in inharmonious emission types being used in the same segments of the frequency bands. We also conclude that allowing amateur stations to transmit these emission types is consistent with the basis and purpose of the amateur service, specifically to continue to contribute to the advancement of the radio art. We conclude that good cause has been shown for temporary waiver of Section 97.3(c)(5) to allow amateur stations to transmit emission types FXE and F7E as a phone emission and Section 97.307(f)(8) to allow amateur stations to transmit emission type FXD as a data emission. We therefore waive these rules accordingly, conditioned on the outcome of the pending rulemaking proceeding."

EQUIPMENT FOR SALE

ICOM 756 ProIII and ICOM 7600

Hank Wolfla, K9LZJ, and Gary Stouder, K9SG, are selling a couple of radios from their remote station. They are asking \$2000 for the 756 ProIII, and \$3100 for the 7600. If interested, contact Hank at hwolfla@gmail.com or 317-861-0186.

MORE EQUIPMENT FOR SALE

Heathkit SB-220 2KW linear amplifier, has power supply problem, NO TUBES, good meters etc. \$150.00

Eimac (Two) 3-500Z tubes, new in original boxes \$125.00 Each, Sold only as a pair

Chinese (Two) 3-500GZ tubes, used 5 hours in above SB-220 amp. \$125.00 Each, Sold only as a pair

MFJ 462B code reader, connect to any audio source, like new, never used. Check MFJ catalog for details. \$75.00

Astatic D-104 Microphone, with new W2ENY mic element, sounds good, wired for ICOM rigs, with wiring diagrams for other transceivers. \$55.00

If interested, contact John Lee W9GRE, Phone: 317-251-3793, E-Mail; W9GRE@Comcast.net

YET MORE EQUIPMENT FOR SALE

Yaesu FT897 HF + 2 meter + 70 cm all mode radio plus accessories. This is the non-D model (No 60 meter channels). My main use of the radio was as a portable/alternate location rig. The radio got limited use on vacations with a portable antenna. I am asking \$600 for the FT897, including a MH-59 (DTMF) microphone, and an LDG FT Meter. I have a manual for the radio, but no box.

If you're interested in this package, please contact Ken Bandy, KJ9B, either via email, at kj9b@arrl.net, or via my cell phone, at (317) 446-3312. I am located north of Brownsburg.

FEEL FREE TO SHARE OUR NEWSLETTER

If you belong to any other radio groups, please feel free to share our newsletter with them. They can also sign up to be on our mailing list by filling out the form available at <http://www.indyradioclub.org/rqstnewsletter.htm>.

WELCOME NEW MEMBERS

Michael Bowman, K9MDB
Charles Campbell, W9NBZ
Ron Wilham, KD9JGD

SEND ME YOUR HAM RADIO NEWS

If anyone has any items for the newsletter, please send them to Ken Bandy at kj9b@arrl.net

Signals from the Past:

From the October, 1976 *Ama-Chewer*:

PROGRAM REVIEW: Sept. 24th. The Willard Park tour was supervised by Sgt. Roger Beard. Approx 50 members and guests visited the Indpls Police Radio station at Willard Park and the dispatching department at the City County Bldg. The new system will use 8 of the 11 channels obtained on UHF since space on VHF is no longer available. The key of the new setup is a Walkie-Talkie costing 1600 dollars per unit and one to be issued to each officer. They operate in the 460 MC range at 1 watt, manufactured by G. E. Twenty satellite receivers located throughout the city will pick up these transmissions, direct and relay them to the station at Willard Park where they will be processed, recorded, and repeated as required. The satellites are sensitive receivers located at 100 foot heights, usually on Fire Station locations. Each officer is assigned a three digit number and is called directly, his unit making a beep sound or lighting a red light. All operations are housed in a new addition to the old facility and a new 500 foot antenna completes the station. In case of emergency an officer can effect a call by pulling out an emergency tab located on the rear of the unit, causing his set to transmit his code signal until the emergency is resolved and will act as a locator homing beacon. The City County tour was supervised by officer L. C. Sanborn, IPD, a knowledgeable YL. The third floor houses the communications department, consisting of three major items, a computer, recorders, and dispatch consoles, for both, Police and Fire Depts. A new emergency number has been assigned by which the public at large gain access directly to the dispatchers, dialing 911 for emergencies only. Ordinary calls are made using the 633-3000 for police and 633-6066 for fire. 120 phone lines are in use at 12 consoles, designed by Western Electric for Police use. The City is divided up into sections, each one is maintained by computer and the information read-out appears on TV monitor scopes. All telephone and radio conversations are automatically recorded on magnetic tape. Communications are maintained in addition with Sheriff, Point to Point, narcotics, Medics ambulances and the State Police. The cost of this facility was about 6 ½ million dollars.

Upcoming Area Radio Events:

- May 4: Indiana QSO Party go to <http://www.hdxcc.org/inqp/> for more info
- May 18: Bus to Dayton Hamvention
- July 13: Indy Hamfest. Go to www.indyhamfest.com for more information

2013 Officers:

- President: Dave Spoelstra, N9KT – EMAIL n9kt@arrl.net
- Vice Pres.: Dave Miller, K9RTT - ..EMAIL dmiller@ivytech.edu
- Secretary: Ken Bandy, KJ9B - ..EMAIL kj9b@arrl.net
- Treasurer: Rhonda Curtis, WS9H - ..EMAIL WS9H@comcast.net
- Chief Operator: Tom Chance, K9XV - ..EMAIL k9xv@arrl.net
- Dir. at large: Jim Rinehart, K9RU – EMAIL k9ru@arrl.net
- Dir. at large: Jerry Skoll, KC9DTB - ..EMAIL gskoll@msn.com
- Dir. at large: Bob Osterhous - ..EMAIL rosterhous@iquest.net
- W9JP Trustee: Don Hemenover, N9DOO – EMAIL don9doo@lightbound.com